IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended): An image processing apparatus for compressing an input image using a motion vector, the image processing apparatus comprising:

~~storing~~ means for storing position information of each pixel of a first frame that is earlier in time than a second frame at an address corresponding to a feature value that is based on a value of said each pixel and [[or]] a pixel peripheral to said each pixel, the feature value representing a feature of said each pixel;

~~first detecting~~ first means for detecting the position information stored at an address corresponding to a feature value that is based on a value of the target pixel of which a motion vector is to be determined or a pixel peripheral to said target pixel of the second frame, the feature value representing said feature of said target pixel;

~~determining~~ means for determining a centroid of candidate pixels of the first frame which are identified with the position information detected by the ~~first detecting~~ first means for detecting; and

second ~~detecting~~ means for detecting a motion vector of the target pixel from the position of the target pixel and the centroid.

2. (Currently Amended): An image processing method for an image processing apparatus that compresses an input image using a motion vector, the method comprising:

storing position information of each pixel of a first frame that is earlier in time than a second frame at an address corresponding to a feature value that is based on a value of said each pixel and [[or]] a pixel peripheral to said each pixel, the feature value representing a feature of said each pixel;

detecting the position information stored at an address corresponding to a feature value that is based on a value of a target pixel of which a motion vector is to be determined or a pixel peripheral to said target pixel of the second frame, the feature value representing said feature value of said target pixel;

determining a centroid of candidate pixels of the first frame which are identified with the position information detected; and

detecting a motion vector of the target pixel from the position of the target pixel and the centroid.

3. (Currently Amended): A computer readable medium having stored thereon a computer-readable program which causes a computer to execute a method for compressing an input image using a motion vector is recorded, comprising:

controlling storage of position information of each pixel of a first frame that is earlier in time than a second frame at an address corresponding to a feature value that is based on a value of said each pixel and [[or]] a pixel peripheral to said each pixel, the feature value representing a feature of said each pixel;

controlling detection of the position information stored at an address corresponding to a feature value that is based on a value of a target pixel of which a motion vector is to be determined or a pixel peripheral to said ~~of a~~ target pixel of the second frame, the feature value representing said feature value of said target pixel;

controlling determination of a centroid of candidate pixels of the first frame which are identified with the position information detected; and

controlling step of controlling detection of a motion vector of the target pixel from the position of the target pixel and the centroid.

4-14. (Canceled)

15. (New): An image processing apparatus for compressing an input image using a motion vector, the image processing apparatus comprising:

a memory configured to store position information of each pixel of a first frame that is earlier in time than a second frame at an address corresponding to a feature value that is based on a value of said each pixel and a pixel peripheral to said each pixel, the feature value representing a feature of said each pixel;

a motion vector detector configured to detect the position information stored at an address corresponding to a feature value that is based on a value of the target pixel of which a motion vector is to be determined or a pixel peripheral to said target pixel of the second frame, the feature value representing said feature of said target pixel;

the motion vector detector configured to determine a centroid of candidate pixels of the first frame which are identified with the detected position information; and

the motion vector detector configured to detecting a motion vector of the target pixel from the position of the target pixel and the centroid.